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- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: INFORMATION CARRIER

POINTER

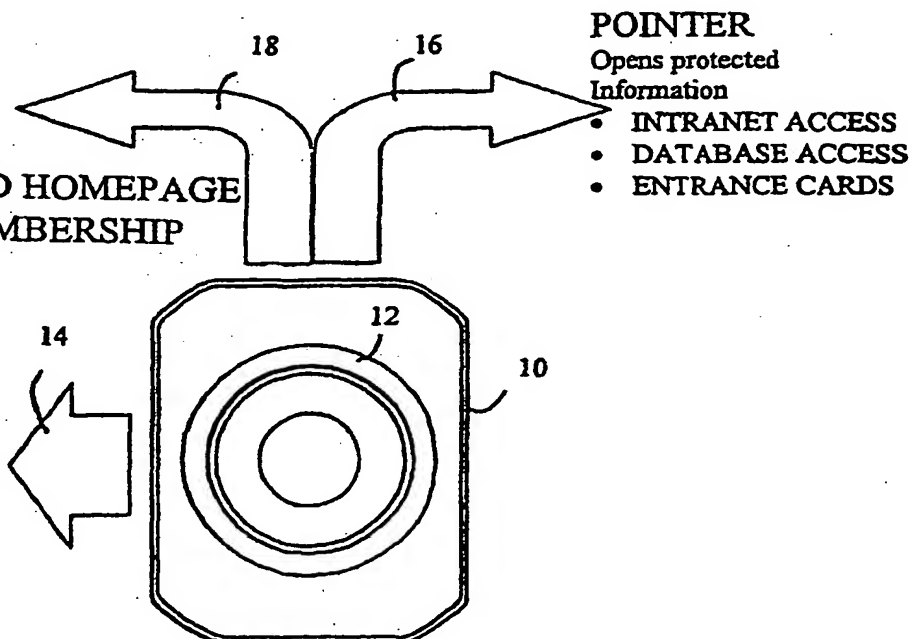
Leads to a
dedicated server

- PORTALS
- SELECTED HOMEPAGE
- CLUB MEMBERSHIP

CARRIER

Contains all types
Of multimedia
Information

- FILMS
- MUSIC
- GAMES



(57) Abstract: The present invention concerns a device in the form of an information carrier (10) and a method for the same, for access to information in a network (29). It allows dynamic communication for a user and the provider of a service that is comprised in the carrier (10).

EV005525138US

WO 01/06342 A1

Information carrier**Technical field**

The present invention concerns a device in the form of an information carrier and a method for access to information via an information carrier. A specific embodiment of the device comprises that it is designed to be the size of a credit card or a smart card, with a storage medium, such as a CD storage medium, on the card.

Prior art

It has long been possible to store information in the form of sound, images, text, etc., on what are known as "CD" discs ("Compact Discs") for access to the information. The information is written into and stored in a layer of material of the disc that has been processed for this purpose, and then becomes available when the CD disc is placed into a reader unit, known as a "CD player" or "CD reader". The CD reader reads the available information, whereby it in turn can be connected to a loudspeaker system, image monitor or similar presentation devices.

A further type of disc exists, which has been named "DVD" ("Digital Versatile Disc"). This disc is mainly used for two functions: DVD-video and DVD-ROM (DVD Read Only Memory). DVD-video stores video recordings that are presented through a DVD-player connected to a television set. DVD-ROM stores information that is, in principle, the same as the information stored in a computer, whereby the information becomes available in the same way as when using a television set, but in this case through a computer. Information stored on a CD can be deleted, in exactly the same way as that stored on a DVD, whereby the CD and the DVD can be re-used for storage of new information. Further, a DVD disc in the form of what is known as "audio format" exists.

A DVD can store information in several layers in the disc, and thus it can be said to comprise a faster CD with larger capacity. Major advantages of both the CD- and the DVD-technique are that storage and retrieval of information is achieved relatively free of disturbance, and that the discs are very insensitive to external influences.

In the remainder of the present document, the expression "CD" will be used to cover also DVD and other similar digital information carriers.

Recently, a CD-card has been constructed that is square within an ordinary charge card or smart card, and which uses CD information technology. The construction is such that a mini-CD is cut to a square boundary, but with a mini-CD information carrier within the perimeter of the card, that is: a circular storage unit functioning as a CD unit is located

on the card. The cards can be placed into a conventional CD reader for reading.

The German "Gebrauchsmuster" DE, U1, 29616619 and DE, U1, 29709648 are examples of such cards. The size of the card corresponds to the size of a normal credit card.

5 One problem with all forms of charge card, credit card, smart card, etc., (not necessarily provided with a CD storage unit) is that they are dedicated to one static function, such as cards for the withdrawal of money, cards for making purchases, attendance cards, membership cards, telephone cards, etc. The expression "the card has one static function" is used to mean that an active dialogue cannot be carried out between a
10 user of the card and the connection to which the card is an interface. This means that the communication between the user and the connection is predetermined, whereby a dynamic communication is prevented. There may exist a requirement for a dynamic communication between a user and the connection when the preconditions on which the communication is based alter during the communication. A dynamic communication is also required when
15 the card mediates in a social contact. The examples given above of requirements for a dynamic communication are two out of a multitude of other possible examples.

It is thus one intention of the present invention to specify a device in the form of an information carrier and a method for the same that offers dynamic communication opportunities for a user of the information carrier and for the connection that the carrier
20 mediates according to the attached independent claims. Further specific embodiments of the invention are specified hereby by the non-independent claims.

Summary of the described invention

The present invention specifies a device in the form of an information carrier and a method concerning the device for access to information in a network, whereby the carrier,
25 among other things, solves the problems associated with dynamic communication for a user and the provider of a service that is comprised in the card.

The device is in the form of an information carrier for access to network information. It allows dynamic communication for a user and the provider of a service that is comprised in the carrier, whereby it comprises:

30 devices for storage and creation of a code key for access to at least one service in a network that is only available for the user of the carrier, whereby the service is directly adapted solely for the needs of the user;

devices for at least one pointer that automatically directs the user to at least one

specific server for the said service following activation of the carrier;

devices for storage and activation of a web browser that is specifically designed for the requirements of the said user; and

whereby the information carrier is designed in a format that is comfortable to carry and to be borne by a person, and whereby the provider of the service provides the service for the user by assignment of the carrier.

In one embodiment of the invention, the service is designed by the provider without participation of the user.

The carrier in one embodiment of the invention can be a Compact Disc (CD, DVD, etc.).

The Compact Disc in one embodiment of the invention is comprised in a card where parts of its perimeter are always less than the standard for the size of charge cards or smart cards.

The browser in one embodiment of the invention is designed to be specific for a specific user and thus does not depend on the standard Internet language HTML, whereby it allows access to other networks with databases, with which it is possible to communicate using other languages suitable for such purposes.

In a further embodiment, the provider or possessor of the service is a commercial company or an organisation.

In yet a further embodiment of the present invention, the service comprises the provision of updates for the user from his or her commissioner concerning information from a principal location or from a manager.

A further embodiment of the invention comprises the service providing access to a video conference over a network.

A further embodiment is that the service comprises all the rights and benefits that the user has received, which rights and benefits have been initiated by the carrier depending on the choice of right or benefit.

Further, the present invention specifies a method concerning a device in the form of an information carrier for access to network information. It allows a dynamic communication for a user and the provider of a service that is comprised in the card, whereby the following are achieved:

storage and creation of a code key on the carrier for access to at least one service in the network that is only available for the user of the carrier, whereby the service is directly

adapted solely for the needs of the user;

automatic direction of the user, via the carrier, to at least one specific server for the said service following activation of the carrier by a pointer;

storage and activation of a web browser on the carrier that is specifically designed
5 for the requirements of the said user; and

whereby the information carrier is designed in a format that is comfortable to carry and to be borne by a person, and whereby the provider of the service provides the service for the user by assignment of the carrier.

Furthermore, the method comprises embodiments according to those presented above
10 for the device and according to the attached claims for the method.

Brief description of the drawings

In the remainder of the present descriptive text, reference will be made to the attached drawings in order to obtain a better understanding of the invention and its embodiments, whereby:

15 **Fig. 1** illustrates an embodiment of an information carrier according to the present invention;

Fig. 2 illustrates an application for the information carrier according to fig. 1; and

Fig. 3 illustrates a further application for the information carrier according to fig. 1.

Detailed description of preferred embodiments

20 The device and the method according to the present invention are preferably concerned with an information carrier in the form of a conventional rectangular card in the format of a credit card, charge card or smart card according to standards for such. The cards are provided with a storage medium such as CD, DVD, active circuit or similar. It is not excluded that a CD, computer diskette or DVD according to the standards for these
25 may in themselves be information carriers.

An embodiment of an information carrier according to the present invention is shown in fig. 1. The information carrier 10 here has been achieved in the form of a rectangular card with rounded corners in order for it to be placed for reading into a CD reader or similar. The card comprises a CD 12.

30 The card, as an information carrier, can contain any information whatsoever on the CD 12 according to a provider of the card, for example any form of multimedia information 14 (marked with an arrow in fig. 1), music, films, games, etc.

The card comprises, here on the CD storage unit 12, devices for storage and creation

of a code key 16, labelled with a right-pointing arrow in fig. 1, for access to at least one service available in the network that is for the sole use of one user of the carrier. The service is directly adapted only to the requirements of the user. The device for storage and/or creation of the code key is preferably a driver or a program module that is
5 comprised on the CD 12. The key is designed in order to provide access to the specific service that is comprised on the carrier. The key 16 provides access to, for example, a protected information point on an intranet, databases, admittance cards, etc.

The CD 12 further comprises a device for at least one pointer 18 that automatically directs a user to at least one specific server for the said service when the carrier 10 is
10 activated. The device for the pointer can consist of, for example, a driver or a program module suitable for the purpose. The pointer 18 automatically directs the user of the carrier 10 towards portals, a home page selected by the said service, club memberships, etc.

Furthermore, the CD 12 in the carrier 10 contains devices for the storage and activation of a web browser that has been specifically designed for the requirements of the
15 user. This means that the user of a service that is comprised on the carrier obtains access to a web browser that has been uniquely constructed precisely for that service that the provider of the service wants a user to have, that is: the web browser can be designed for other coding languages than HTML (Hypertext Mark-up Language) so that networks other than the Internet can be reached by the user. The web browser allows information 14 to be
20 read and allows the information to be read that exists on the network that the user of the carrier 10 is connected to. Normal known web browsers are Lynx[®], NCSA Mosaic, Netscape Navigator[®] and Internet Explorer[®].

When a user connects to a network or a database, the web browser allows both the provider and the user of the network to communicate dynamically with each other, with the
25 information that the network contains, for example, to formulate their own questions that are not pre-programmed in the storage unit 12 on the carrier 10.

Fig. 2 illustrates an application of the carrier 10 according to the present invention. A customer of a shop or of a larger shop group receives a carrier 10, for example a bonus card, that is unique for the shop and/or the customer, with its own web browser 20 from the
30 shop (the provider of a carrier). When the card is introduced into, for example, a CD reader 22 in a PC 24 at the customer's home 26, the customer is automatically connected to the home page 27 of the shop, here over the Internet 29 to the database server 25 of the shop, and for the bonus card through the device for the code key 16 and the pointer 18. The

automatic connection solves a major problem for a user who is not familiar with using computers.

The customer's carrier 10 is swept in the shop 28 through the shop's magnetic reader 30 for registration of the bonus. The carrier 10 or a cover 32 can be provided with a conventional magnetic stripe 34 for credit cards. The bonus is thus registered, for example, in the local server 36 of the shop, which, for example, upgrades the bonus in the main server 25 of the shop or chain of shops over the Internet 29.

The customer can purchase goods through the customer's own home page 27 for the shop 28, receive advertising and place orders, make complaints, submit suggestions for improvement, etc. A really flexible dynamic method of communication between the provider 28 of the carrier 10 and the customer is achieved by the carrier 10 according to the present invention. The carrier 10 can also contain devices for automatic network telephony if the provider 28 provides that service.

The application according to fig. 2 shows a "point-to-point" bonus system, that is, bonus both at home and in the shop.

A further example of the use of an information carrier 10 according to the present invention is shown in fig. 3. The figure shows a method for conducting a seminar over the Internet 29. The carrier 10 has a code key 16 for connection to the relevant seminar via the device for this, and on the carrier is found the device for the pointer to the relevant server 38 and the software 14 that is comprised with a web browser 20 that is unique for the seminar, whereby the software with the device for producing the code key 16 and the device for the pointer 18 automatically connect those who have received the carrier 10 for the particular seminar or a group of researchers who maintain contact with each other over the seminar carrier 10.

Thus the carrier 10 automatically initiates a connection to the seminar and lists any participants or companies that may be present. Images, sound or animations comprised in the carrier 10 are mixed with similar images, sound or animations from the server 38, whereby the carrier 10 with its software and the unique web browser 20 collaborate in order to achieve the absolutely shortest download time for the code that is assigned by the server 38 to be displayed for a user.

The interactive nature (the dynamism) is complete when the provider of the seminar carrier 10 or the host for the same can follow the activity of the users and communicate with them at any time, and vice versa.

A carrier according to the present invention allows, among other things, that all activity can be retrieved on a freely chosen occasion, which makes efficient follow-up and a comprehensive customer database possible.

Further examples of areas of application for an information carrier 10 according to the present invention follow below:

Example 1. As a company card 10 for, for example, a consultancy company in which the operations are seldom or never carried out on their own premises, whereby an employee can maintain contact with the company and other employees by means of the card 10, and in this way obtain the opportunity for feeling a sense of community with the company.

Example 2. As a business card 10, whereby the business card, for example, connects to a home page on the Internet 29 such that essentially all information about the company, etc., concerning the person for whom the card has been issued is presented.

Example 3. In order physically to open the doors of premises.

Example 4. As an entry ticket to events.

Example 5. As a membership card for clubs and societies.

Example 6. As a card to unlock or allow access to a vehicle, where the card automatically mediates adjustments such as the adjustment of mirrors, the code for the radio, etc. In short, the profile of the owner of the vehicle over the communication network of the vehicle. A further card or the same card can contain profiles of members of the family.

Example 7. As a carrier for connection to a particular video conference.

Of course, there exist many further ways in which an information carrier according to the present invention will be useful. The desired interactivity and dynamism is comprised in the examples and embodiments described above.

Furthermore, the invention comprises a method concerning a device according to the above in the form of an information carrier 10 for access to information in a network. The device thus allows dynamic communication for a user and a provider 28 of a service that is comprised in the carrier, whereby the following are achieved:

storage and creation of a code key 16 on the carrier for access to at least one service in a network 29 that is only available for the user of the carrier, whereby the service is directly adapted solely for the needs of the user;

automatic direction via the carrier of the user to at least one specific server for the said service following activation of the carrier by a pointer 18;

storage and activation of a web browser on the carrier that is specifically designed for the requirements of the said user; and

5 whereby the information carrier is designed in a format that is comfortable to carry and to be borne by a person, and whereby the provider of the service provides the service for the user by assignment of the carrier 10.

Other characteristics of the device described above are comprised also in the method.

The present invention has been described in this document using preferred
10 embodiments and examples, but it is not for this reason limited to cover only these. Rather, it is the extent of the attached claims that defines the invention for one skilled in the arts in this technical area.

Claims

1. Device in the form of an information carrier (10) for access to information (27) in a network,

c h a r a c t e r i s e d in that it allows dynamic communication for a user and a provider (28) of a service that is comprised in the carrier (10), whereby it comprises:

devices for storage and creation of a code key (16) for access to at least one service in a network (29) that is only available for the user of the carrier (10), whereby the service is directly adapted solely for the needs of the user;

devices for at least one pointer (18) that automatically directs the user to at least one specific server (25, 36, 38) for the said service following activation of the carrier (10);

devices (12, 14) for storage and activation of a web browser that is specifically designed for the requirements of the said user; and

whereby the information carrier (10) is designed in a format that is comfortable to carry and to be borne by a person, and whereby a provider (28) of the service provides the service for the user by assignment of the carrier (10).

2. Device according to claim 1, **c h a r a c t e r i s e d** in that the service is designed without the participation of the user.

3. Device according to claims 1 and 2, **c h a r a c t e r i s e d** in that the actual carrier is a Compact Disc.

4. Device according to claim 3, **c h a r a c t e r i s e d** in that the Compact Disc is comprised in a carrier (10) where parts of its perimeter are always smaller than the standard for the size of charge cards or smart cards.

5. Device according to claims 1-4, **c h a r a c t e r i s e d** in that the web browser (20) is specific for the user and in this way does not depend on the standard Internet language HTML, whereby it allows access to other networks with databases, with which it is possible to communicate using other languages [suitable] for such purposes.

6. Device according to claims 1-5, **c h a r a c t e r i s e d** in that the provider (28) is a commercial company (28) or an organisation.

7. Device according to claim 6, **c h a r a c t e r i s e d** in that the service comprises the user being updated by his or her commissioner concerning information from a principal location or from a manager.

8. Device according to claims 1-7 **c h a r a c t e r i s e d** in that the service comprises access to a video conference over a network.

9. Device according to claims 1-8, **c h a r a c t e r i s e d** in that the service comprises all the rights and benefits that the user has received, which rights and benefits have been initiated by the carrier (10) depending on the choice of right or benefit.

5 10. Method concerning a device in the form of an information carrier (10) for access to information (27) in a network, **c h a r a c t e r i s e d** in that it allows dynamic communication for a user and a provider (28) of a service that is comprised in the carrier (10), whereby the following are achieved:

10 storage or creation of a code key (16) on the carrier for access to at least one service in a network (29) that is only available for the user of the carrier (10), whereby the service is directly adapted solely for the needs of the user;

automatic direction of the user, via the carrier, to at least one specific server for the said service following activation of the carrier by a pointer (18);

storage and activation of a web browser (20) on the carrier that is specifically designed for the requirements of the said user; and

15 whereby the information carrier (10) is designed to be in a format that is comfortable to carry and to be borne by a person, and whereby the provider (28) of the service provides the service for the user by assignment of the carrier.

11. Method according to claim 10, **c h a r a c t e r i s e d** in that the service is designed without the participation of the user.

20 12. Method according to claims 10 and 11, **c h a r a c t e r i s e d** in that the actual carrier (10) is a Compact Disc.

13. Method according to claim 12, **c h a r a c t e r i s e d** in that the Compact Disc is comprised in a carrier (10) where parts of its perimeter are always smaller than the standard for the size of charge cards or smart cards.

25 14. Method according to claims 10-13, **c h a r a c t e r i s e d** in that the web browser (20) is specific for the user and in this way does not depend on the standard Internet language HTML, whereby it allows access to other networks with databases, with which it is possible to communicate using other languages [suitable] for such purposes.

30 15. Method according to claims 10-14, **c h a r a c t e r i s e d** in that the provider (28) is a commercial company or an organisation.

16. Method according to claim 15, **c h a r a c t e r i s e d** in that the service comprises the user being updated by his or her commissioner concerning information from a principal location or from a manager.

17. Method according to claims 10-16 **c h a r a c t e r i s e d** in that the service comprises access to a video conference over a network (29).

18. Method according to claims 10-17, **c h a r a c t e r i s e d** in that the service comprises all the rights and benefits that the user has received, which rights and benefits
5 have been initiated by the carrier (10) depending on the choice of right or benefit.

POINTER

Leads to a
dedicated server

- PORTALS
- SELECTED HOMEPAGE
- CLUB MEMBERSHIP

POINTER

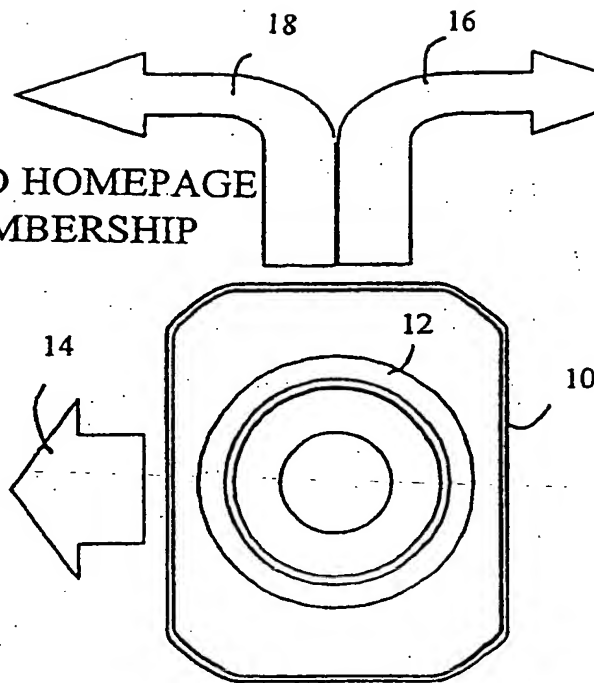
Opens protected
Information

- INTRANET ACCESS
- DATABASE ACCESS
- ENTRANCE CARDS

CARRIER

Contains all types
Of multimedia
Information

- FILMS
- MUSIC
- GAMES

**Fig. 1**

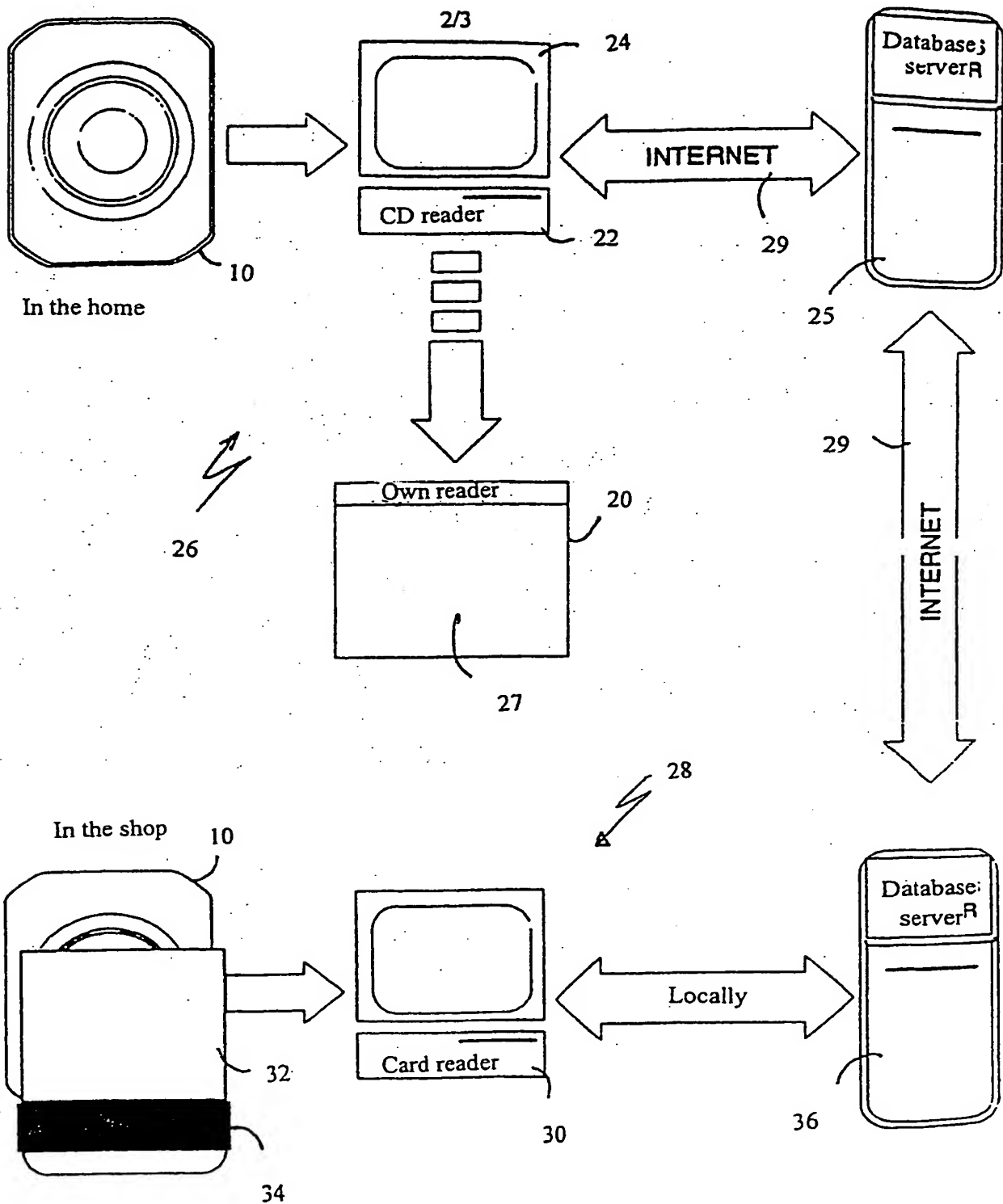


Fig. 2

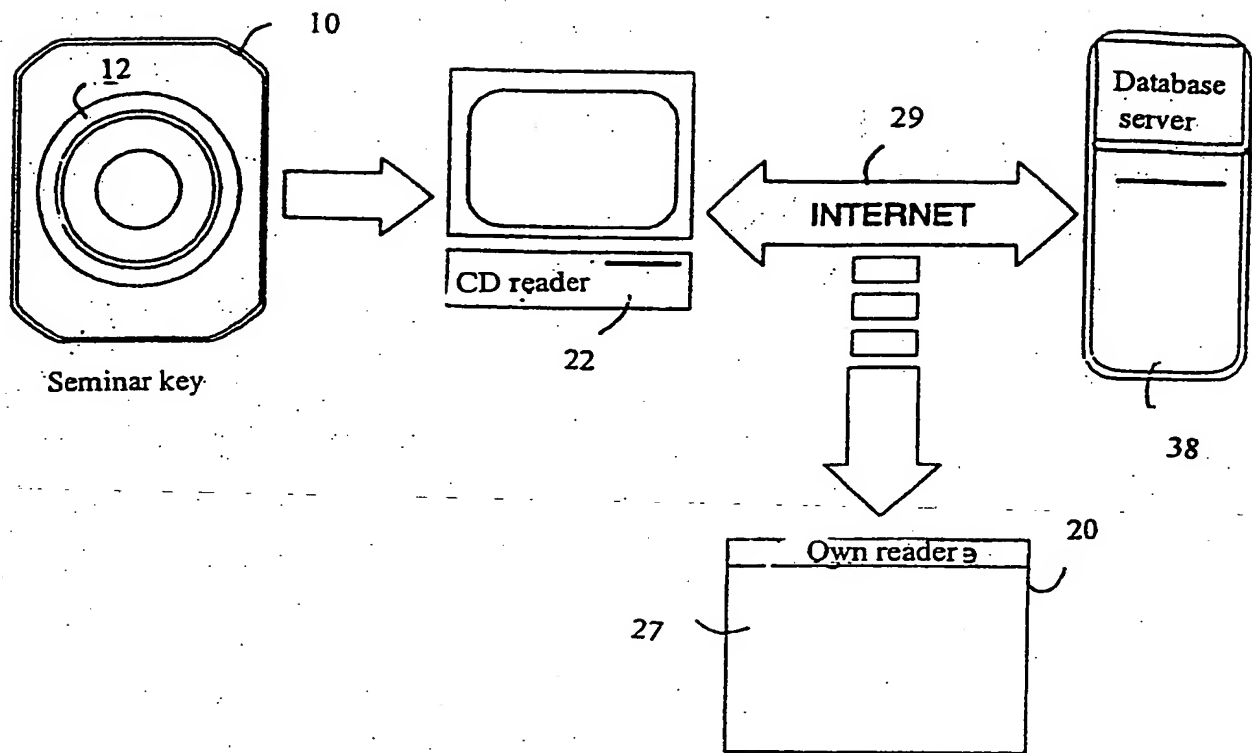


Fig. 3

INTERNATIONAL SEARCH REPORT

1

International application No.

PCT/SE 00/01482

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: G06F 1/00, H04L 9/32, G06F 12/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: G06F, H04L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5771291 A (F.NEWTON ET AL), 23 July 1998 (23.07.98); column 3, line 7 - line 11; column 1, line 65 - column 2, line 23, claims 1-4, abstract	1-3,5-12, 14-18
Y	abstract	4,13
	--	
Y	DE 29616619 U1 (BLAHA,FRANTISEK), 16 January 1997 (16.01.97), figure 2, claims 1-4	4,13
	--	
X	WO 9930455 A1 (HAYES,THOMAS,J.), 17 June 1999 (17.06.99), page 2, line 30 - page 4, line 4, abstract, claims 1,3,6,7,11,12,15	1-3,5-12, 14-18
Y	abstract	4,13
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☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
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- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

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"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 00/01482

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	DE 29709648 U1 (OTTERSTEIN,KARL), 29 January 1998 (29.01.98), figures 1,2, claims 1-3,9 -----	4,13

INTERNATIONAL SEARCH REPORT
Information on patent family members

01/08/00

International application No.
PCT/SE 00/01482

Patent document cited in search report			Publication date	Patent family member(s)	Publication date
US	5771291	A	23/07/98	NONE	
DE	29616619	U1	16/01/97	NONE	
WO	9930455	A1	17/06/99	AU 1812799 A	28/06/99
DE	29709648	U1	29/01/98	NONE	